

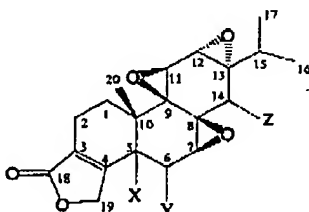
Appl. No. 10/540,908
 Amdt. Dated April 16, 2009
 Reply to Office Action of January 13, 2009

Amendments to the Claims:

This listing will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently amended): Triptolide derivatives having the structure represented by the formula (1) shown as below, or pharmaceutically acceptable salts thereof, or their optical diastereoisomers:



(1)

wherein X is OH (R stereochemistry), Y is OH (S stereochemistry) or H; or X and Y together form a double bond or R,S-epoxide; C-5 and C-6 are connected through single or double carbon-carbon bond; when C-5 and C-6 are connected by single bond, X and Y independently represent hydrogen, oxygen, hydroxyl, halogen, alkoxy, mercapto, NR_1 , R_2 , SR_3 , OCOR_4 , OSO_2OR_5 , or $\text{OPO}(\text{OH})_2$ linked to C-5 or C-6, in which R is $(\text{CH}_2)_n\text{CO}_2\text{Na}$, $(\text{CH}_2)_n\text{CO}_2\text{K}$ or $(\text{CH}_2)_n\text{CH}_3$, and $n=1-6$;

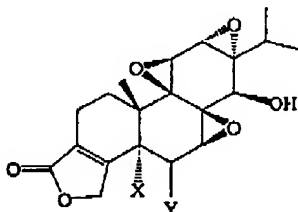
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Z is OH, O or OCOR, ~~hydrogen, oxygen, hydroxyl, halogen, alkoxy, mercapto, $N-R_1R_2$,
 SR , $OCOR$, OSO_2OR , or $OPO(OH)_2$~~ linked to C-14, in which R is $-(CH_2)_nCO_2Na$,
 ~~$-(CH_2)_nCO_2K$, $-(CH_2)_nCO_2K^{***}$, $-(CH_2)_nCH_3$, $n=1-6$;~~

in the above formula (1), “-“ that attaches to “X”, “Y” and “Z” represents the stereochemistry orientations “~~————~~” and “~~|||||~~” as well; ~~and~~

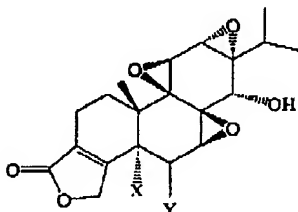
~~X and Y are not allowed to be hydrogen at the same time.~~

Claim 2 (Currently amended): Triptolide derivatives according to claim 1, wherein the configuration of X is a α (R), ~~that of Y is (R) or (S)~~, and Z is β -OH(R) shown as formula (2):



(2)

Claim 3 (Currently amended): Triptolide derivatives according to claim 1, wherein the configuration of X is α (R), ~~that of Y (R) or (S)~~, and Z is α -OH(s) shown as formula (3):

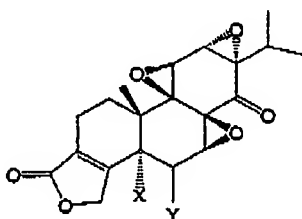


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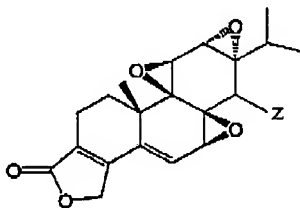
(3)

Claim 4 (Currently amended): Triptolide derivatives according to claim 1, wherein the configuration of X is a α (R), that of Y (R) or (S), and Z is O shown as formula (4):



(4)

Claim 5 (Previously presented): Triptolide derivatives according to claim 1, wherein C-5 and C-6 are connected by double bond, and the configuration of Z is R or S, or Z=O as shown formula (5):



(5)

Claim 6 (Previously presented): Triptolide derivatives according to claim 1, which comprise the following: (5R)-5-hydroxytriptonide, (5R)-5-hydroxytriptolide, (5R)-5-hydroxy-14-epitriptolide,

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$\Delta^{5,6}$ -dehydrotriptonide, $\Delta^{5,6}$ -dehydrotriptolide, $\Delta^{5,6}$ -dehydro-14-epitriptolide, (5R,6S)-5,6-epoxytriptonide, (5R,6S)-5,6-epoxytriptolide, (5R,6S)-5,6-epoxy-14-epitriptolide, *cis*-(5R,6S)-5,6-dihydroxytriptonide, *cis*-(5R,6S)-5,6-dihydroxytriptolide, *cis*-(5R,6S)-5,6-dihydroxy-14-epitriptolide.

Claim 7 (Previously presented): A pharmaceutical composition prepared from the triptolide derivatives of claim 1.

Claim 8 (Withdrawn): A method of treating at least one of autoimmune diseases, including arthritis, systemic lupus erythematosus, chronic nephritis, diabetes and inflammatory diseases, including AIDS, hepatitis, and allergies and skin diseases, and cardiovascular diseases, and transplant rejections, and anti-fertility and immune related diseases which comprises administering the pharmaceutical composition of Claim 7.

Claim 9 (Withdrawn): A pharmaceutical composition according to claim 7 which comprises at least one of an anti-inflammatory agent, and an immunosuppressant.

Claim 10 (Withdrawn): A method of treating at least one of an autoimmune disease and an inflammatory disease which comprises administering the pharmaceutical composition of Claim 9.